

IX.3.4B-WPD1S SUBROUTINE WPD1S

Description

Subroutine WPD1S writes observed non-RRS data types except stranger precipitation reports and MDR data to the Preprocessor Data Base and updates the station statistics for one station for a specified period.

Calling Sequence

CALL WPD1S (ISTAID, IDTYPE, NTYPES, IDATYP, IUNITS, IFHOUR, L HOUR, LDATA,
DATA, IWRITE, IREV, ISTAT)

Argument List

<u>Argument</u>	<u>Input/ Output</u>	<u>Type</u>	<u>Dimension</u>	<u>Description</u>
ISTAID	Input	A8 or I*4	1	Station identifier Station number
IDTYPE	Input	I*4	1	Station identifier/number indicator: 0 = ISTAID is identifier 1 = ISTAID is number
NTYPES	Input	I*4	1	Number of data types to be written
IDATYP	Input	A4	NTYPES	Data type codes to be written 1/ 2/
IUNITS	Input	A4	NTYPES	Units code for each data type to be written 4/
IFHOUR	Input	I*4	NTYPES	Hours since 0Z on January 1, 1900 of the first period of data to be written 3/ 5/
LHOUR	Input	I*4	NTYPES	Hours since 0Z on January 1, 1900 of the last period of data to be written 5/
LDATA	Input	I*4	1	Length of array DATA
DATA	Input	R*4	LDATA	Array containing data from IFHOUR to LHOUR for each data type (data for each day will be organized as shown in note 3 for subroutine RPDDLY for each data type that has more than one value per day)

<u>Argument</u>	<u>Input/ Output</u>	<u>Type</u>	<u>Dimension</u>	<u>Description</u>
				(missing values = -999.0) 6/
IWRITE	Output	I*4	NTYPES	Array indicating whether data type was written: 0 = data were written 1 = data type not found for station 2 = period being written was not consistent with the data on the file 3 = invalid units 4 = invalid revision indicator 5 = invalid value
IREV	Input	I*4	1	Revision indicator: 7/ 0 = a non-revision write 1 = a revision write
ISTAT	Output	I*4	1	Status code: 0 = no errors 1 = ISTAID not found 2 = one or more data types not found or invalid units - valid data types and units are written 3 = period to be written is not continuous with period on file for one or more of the data types being written (i.e. one or more days skipped between data on file and data currently being written) - data types that are continuous are written 4 = invalid units 5 = combination of statuses 2 and 3 6 = combination of statuses 2 and 4 7 = combination of statuses 3 and 4 8 = combination of statuses 2, 3 and 4 9 = not valid data type 10 = file read/write error 11 = not enough data in period specified 12 = data exists for all or part of the time period being written 13 = data outside of allowable

<u>Argument</u>	<u>Input/ Output</u>	<u>Type</u>	<u>Dimension</u>	<u>Description</u>
				range
				20+ = invalid revision indicator
				30+ = invalid value

Notes:

- 1/ Valid data type to be written with this subroutine are all the types given in section IX.3.4A except for EA24, MDR6, PPSR, TF24, TFMN and TFMX. Data types EA24, PPVR and TAVR cannot be used with this routine.
- 2/ Precipitation and instantaneous temperature data can be entered into WPD1S for a smaller time interval than the time interval in which the data are stored. Precipitation values will be accumulated before being written. If the precipitation data entered are only for a portion of the PPDB time interval, the data are only written if the data entered are continuous from the first hour of the PPDB time interval. Precipitation data entered are never added to what already exists for the time interval on the PPDB. In the case of instantaneous temperature data, only values corresponding to the PPDB time intervals will be written.
- 3/ The only new day for which data can be written is the day immediately after the oldest date on the file.
- 4/ Data will be converted to the proper units if needed.
- 5/ The hour entered for instantaneous data is the hour of the observation. The hour entered for mean or accumulated data is the last hour of the period.
- 6/ For PP24, the precipitation value (DATA) and ending hour must be encoded into a single I*2 word before being stored in the PPDB. DATA must first be converted into units of hundreds of an inch (call the converted value PP). The ending hour of the observation within the hydrologic day (range 0 to 23 hours) must be computed from IFHOUR (call this value IH). Then the value stored (IVAL) can be computed as:

$$IVAL = ((PP - 3000) * 10) + (ISGN * IH/3)$$

where ISGN = -1 if PP LE 3000
= 1 if PP GT 3000

The missing data symbol for PP24 data on the PPDB is -9.

- 7/ Except for data type PP24, the rule will be that an existing data value in the PPDB written with these write subroutines can only be changed if the revision indicator is set to one. If the revision indicator is set to one and there is no existing value, the revised values will still be written. If the revision indicator is zero and more than one value is being written, data values will only be

written for those times that do not contain an existing value.

A new day of data can be created with the revision indicator set to one.

For data type PP24 the rules for writing data are:

- o If the revision switch is off only write a data value if:
 - o it is a new data value which is either for a day already on the file or the day after the latest day currently on the file or
 - o the ending hour of the value being written is after the ending hour of the value currently on the file
- o If the revision switch is on always write a data value except if:
 - o it is for a new day which is more that one day after the latest day currently on the file or
 - o the ending hour of the value being written is prior to the ending hour of the value currently on the file